Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing if Claims:

Claims 1 – 26 (canceled)

Claim 27 (original) A method of determining infection in a human patient by, or exposure of a human patient to, a mycobacterium which expresses ESAT-6 which method comprises the steps of:

(i) contacting a population of T cells from the patient with the peptide represented by SEQ ID NO: 1 and, optionally, one or more further peptides selected from the group consisting of the peptides represented by SEQ. ID. NOs. 2 to 11 and

(ii) determining *in vitro* whether the T cells of said T cell population recognise said peptide(s).

Claim 28 (currently amended) A method of determining in a human patient infection by, or exposure to, a mycobacterium which expresses ESAT-6, said method comprising the steps of:

(1) ~~determining whether T cells of the patient recognise~~ administering intradermally to said patient the peptide represented by SEQ ID NO: 1 and, optionally, one or more further peptides represented by SEQ. ID. NOs. 2 to 11, and

(ii) detecting whether said peptide(s) cause(s) an observable delayed-type hypersensitivity (DTH) response.

Claim 29 (original) A method according to claim 27 or claim 28 wherein a peptide panel is employed consisting of, in addition to the peptide represented by SEQ. ID NO: 1, one or more peptides selected from the group consisting of the peptides represented by SEQ. ID. NOs. 2 to 11.

Claim 30 (original) A method according to claim 29 wherein at least the peptides represented by SEQ. ID. NOs. 1 to 8 are employed.

Claim 31 (original) A method according to claim 30 wherein one or more further peptides are employed selected from the group consisting of the peptides represented by SEQ. ID. NOs. 9, 10 and 11.

Claim 32 (canceled)

Claim 33 (previously presented) A method as claimed in claim 27 or claim 28 wherein any of said peptides is substituted by a peptide analogue which is at least 90% homologous~~,~~ to the entire corresponding substituted peptide and which retains the ability to be recognised by T cells of a T cell population which recognise the corresponding substituted peptide.

Claim 34 (previously presented) A method as claimed in claim 27 or claim 28 wherein any of said peptides is substituted by a peptide analogue which has one or more end-terminal deletions and which retains the ability to be recognised by T cells of a T cell population which recognise the corresponding substituted peptide.

Claim 35 (canceled)

Claim 36 (currently amended) A method according to claim 27 ~~or claim 28~~ in which the: recognition of the peptide(s) by the T cells is determined by determining secretion of a cytokine from the T cells.

Claim 37 (original) A method according to claim 36 in which IFN-γ secretion from the T cells is determined.

Claim 38 (original) A method according to claim 37 in which IFN-γ secretion from the T cells is determined by allowing secreted IFN-γ to bind to an immobilised antibody specific to the cytokine and then determining the presence of antibody/cytokine complex.

Claim 39 (original) A method according to claim 27 in which the T cells are: freshly isolated *ex vivo* cells from peripheral blood.

Claim 40 (original) A method according to claim 27 in which the T cells are pre-cultured *in vitro* with the peptide(s).

Claim 41 (original) A method according to claim 27 or claim 28 in which the mycobacterium is *M. tuberculosis* or *M. bovis*.

Claim 42 (original) A method as claimed in claim 29 wherein said peptides are pooled.

Claim 43 (original) A method as claimed in claim 27 or claim 28 wherein presence of a mycobacterium which expresses ESAT-6 is determined in a suspected healthy contact who has been exposed to say mycobacterium.

Claim 44 (previously presented) A kit for carrying out a method of determining infection in a human patient by, or exposure of a human patient to, a mycobacterium which expresses ESAT-6 comprising a peptide panel consisting of, in addition to the peptide represented by SEQ ID NO: 1, one or more peptides

selected from the group consisting of the, peptides represented by SEQ ID NOs: 2 to 11, and optionally a means to detect the recognition of a peptide by the T cells, the peptides of said peptide panel binding T cells indicative of infection with said mycobacterium in humans.

Claim 45 (original) A kit according to claim 44 wherein at least the peptides represented by SEQ. ID Nos. 1 to 8 are employed.

Claim 46 (original) A kit according to claim 44 wherein one or more further peptides are employed selected from the group consisting of the peptides represented by SEQ. ID. Nos 9, 10 and 11.

Claim 47 (canceled)

Claim 48 (previously presented) A kit as claimed in claim 44 wherein any of said peptides is substituted by a peptide analogue which is at least 90% homologous to the entire corresponding substituted peptide and which retains the ability to be recognised by T cells of a T cell population which recognise the corresponding substituted peptide.

Claim 49 (previously presented) A kit as claimed in claim 44 wherein any of said peptides is substituted by a peptide analogue which has one or more end-terminal deletions and which retains the ability to be recognised by T cells of a T cell population which recognise the corresponding substituted peptide.

Claim 50 (canceled)

Claim 51 (original) A kit according to claim 44 which includes an antibody to IFN-γ.

Claim 52 (original) A kit according to claim 51 wherein said antibody is immobilised on a solid support and which optionally also includes a means to detect any antibody/IFN-γ complex.

Claim 53 (currently amended) A method of determining infection in a human patient by, or exposure of a human patient to, a mycobacterium which expresses ESAT-6 which method comprises the steps of;

(i) administering one or more polynucleotides ~~expressing~~ which encode in human cells the peptide represented by SEQ ID NO: 1 and, optionally, one or more farther peptides selected from the group consisting of the peptides represented by SEQ ID Nos: 2 to 11 and

(ii) ~~determining whether T cells of the patient recognise said peptide(s)~~ detecting whether the peptide(s) encoded by said one or more polynucleotides

cause(s) an observable delayed-type hypersensitivity (DTH) response .

Claim 54 (currently amended) A method according to claim 53 wherein at least polynucleotides ~~expressing~~ which encode in human cells the peptides represented by SEQ. ID. Nos. 1 to 8 are employed.

Claim 55 (original) A method according to claim 54 wherein one or more further polynucleotides are employed selected from the group consisting of polynucleotides ~~expressing~~ which encode in human cells the peptides represented by SEQ. ID. Nos. 9, 10 and 11.

Claim 56 (canceled)

Claim 57 (previously presented) A method as claimed in claim 53 wherein any of said peptides is substituted by a peptide analogue which is at least 90% homologous~~,~~ to the entire corresponding substituted peptide and which retains the ability to be recognised by T cells of a T cell population which recognise the corresponding substituted peptide.

Claim 58 (previously presented) A method as claimed in claim 53 wherein any of said peptides is substituted by a peptide analogue which has one or more end-terminal deletions and which retains the ability to be recognised by T cells of a T cell populations which recognise the corresponding substituted peptide.

Claim 59 (cancelled)

Claim 60 (currently amended) A kit for carrying out a method of determining infection in a human patient by, or exposure of a human patient to, a mycobacterium which expresses ESAT-6 comprising one or more polynucleotides ~~expressing~~ which encode in human cells a peptide panel consisting of, in addition to the peptide represented by SEQ ID NO: 1, one or more peptides selected from the group consisting of the peptides represented by SEQ ID NOs: 2 to 11, the peptides of said peptide panel binding T cells indicative of infection with said mycobacterium in humans.

Claim 61 (currently amended) A kit according to claim 60 wherein at least polynucleotides ~~expressing~~ which encode in human cells the peptides represented by SEQ. ID. Nos. 1 to 8 are employed.

Claim 62 (currently amended) A kit according to claim 61 wherein one or more further polynucleotides are employed selected from the group consisting of polynucleotides ~~expressing~~ which encode in human cells the peptides represented by SEQ. ID. Nos: 9, 10 and 11.

Claim 63 (canceled)

Claim 64 (previously presented) A kit as claimed in claim 60 wherein any of said peptides is substituted by a peptide analogue which is at least 90% homologous, to the entire corresponding substituted peptide and which retains the ability to be recognised by T cells of a T cell population which recognise the corresponding substituted peptide.

Claim 65 (previously presented) A kit as claimed in claim 60 wherein any of said peptides is substituted by a peptide analogue which has one or more end-terminal deletions and which retains the ability to be recognised by T cells of a T cell population which recognise the corresponding substituted peptide.

Claims 66 – 74 (canceled)

Claim 75 (original) A method of diagnosing infection in a human patient by, or exposure of a human patient to, a mycobacterium which expresses ESAT-6 which method comprises the steps of:

(i) contacting a population of T cells from the patient with a panel of peptides represented by SEQ. ID. Nos. 1 to 8, wherein said T cells are freshly isolated *ex vivo* cells from peripheral blood, and

(ii) determining *in vitro* whether T cells of said T cell population show a recognition response to said peptides by determining IFN-γ secretion from the T cells.

Claim 76 (original) A method as claimed in claim 75 wherein said panel is expanded to additionally include one or more further peptides selected from the group consisting of the peptides of SEQ. ID. Nos. 9 to 11.

Claim 77 (canceled)

Claim 78 (previously presented) A method as claimed in claim 75 wherein any of said peptides is substituted by a peptide analogue which is at least 90% homologous, to the entire corresponding substituted peptide and which retains the ability to be recognised by T cells of a T cell population which recognise the corresponding substituted peptide.

Claim 79 (previously presented) A method as claimed in claim 75 wherein any of said peptides is substituted by a peptide analogue which has one or more end-terminal deletions and which retains the ability to be recognised by T cells of a T cell population which recognise the corresponding substituted peptide.

Claim 80 (canceled)

Claim 81 (original) A method as claimed in claim 75 wherein said peptides are pooled.

Claim 82 (original) A method as claimed in claim 75 wherein presence of a mycobacterium which expresses ESAT-6 is determined in a suspected healthy contact who has been exposed to said mycobacterium.